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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

In the Matter of)

Revision of Part 22 of the Commission's rules)
governing the Public Mobile Services)

CC Docket No. 92-115

**ORIGINAL
FILE**

REPLY COMMENTS

GTE Service Corporation, on
behalf of its affiliated domestic
telephone operating, cellular, and
air-ground companies

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November 5, 1992

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SUMMARY

The FCC has proposed a broad rewrite of Part 22 of its rules. GTE is supportive of changes that streamline government regulations and delete or change rules that are outmoded, redundant, no longer applicable, or otherwise not required. However, many of the FCC's proposals make substantive changes in the public mobile service rules and many do not include other pending or adopted substantive rule sections. The rewrite proposals may need to be re-visited when these other rulemakings are resolved.

GTE has reviewed the Comments of other parties and supports some parties' proposals and opposes others. GTE believes interim operating authority for unserved cellular areas should be addressed in a separate rulemaking. The concerns regarding the elimination of the fixed service restriction under the cellular service option rule are unfounded. GTE urges the FCC to address the privacy concerns raised by the proposal to monitor spectrum to determine usage.

While GTE supports an expanded definition of emergency operations, there needs to be a clear statement of what types of emergencies are covered. GTE does not believe the emissions limitation for the 800 MHz air-to-ground service should be revised since this will impact interference potential and fade margins. GTE has included a copy of the Air-to-Ground Agreement with Canada for inclusion in the Rules.

GTE agrees that Public Notices need to be issued on a regular basis and supports an FCC investigation of electronic data submission. After reviewing the Comments, GTE believes there are serious problems with the first-come, first-served proposal that will need to be resolved.

GTE has recommended shortening the construction period for paging and radiotelephone service facilities and shifting antenna tower responsibilities to the tower owner. While still supporting the finder's preference proposal, GTE suggests a notice filing and 30 day response interval for the current licensee.

Finally, GTE joins in the widespread opposition to the elimination of the use of multi-channel transmitters.

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REPLY COMMENTS

GTE Service Corporation, on behalf of its affiliated domestic telephone operating, cellular, and air-ground companies ("GTE"), offers its Reply Comments to some of the issues raised in the Comments of other parties in response to the Commission's Notice of Proposed Rule Making, FCC 92-205 (June 12, 1992) ("NPRM"). Over 35 parties responded to the FCC's NPRM. In these Reply Comments, GTE will address specific comments of some parties. In its NPRM the Commission proposed to re-write Part 22 of its rules to make the rules "easier to understand, to eliminate outdated rules and unnecessary information collection requirements, to streamline licensing procedures and to allow licensees greater flexibility in providing service to the public," NPRM, 61.

DISCUSSION

The rewrite proposals may need to be re-visited after other pending proceedings are resolved.

In its Comments at 5-6, PacTel Cellular expresses concern that "the proposed rewrite of Part 22 has proceeded without the inclusion of all of the changes adopted in the Commission's rulemakings on unserved areas (CC Docket No. 90-6) and license renewal for cellular licensees (CC Docket No. 90-

358)" and urges the Commission to provide an opportunity for further comment when Part 22 is conformed to reflect the final resolution of those decisions. Because of the importance to the cellular industry of both of these proceedings as evidenced by the active participation of many parties, GTE agrees with PacTel Cellular and others and joins in urging the Commission to provide an opportunity for further public comment on the cellular rules after these proceedings are resolved.¹ In a similar vein, when final rules are adopted for Personal Communications Services ("PCS"), the cellular rules may need to be re-visited to ensure that both services are on comparable regulatory footings.

Interim operating authority for unserved cellular areas should be addressed in a rulemaking proceeding.

In its Comments at 3-4, PacTel Cellular also suggests that the interim operating authority policy for Rural Service Areas ("RSA") where the original license is being contested, be extended to unserved areas within a Metropolitan Statistical Area ("MSA") or RSA since it may be awhile before service is made

¹ Southwestern Bell ("SWB") notes at 11-13 that the license renewal Order, 7 FCC Rcd 719 (1992), added Section 22.942 to Part 22 along with other rules and these new rules are not referenced in the NPRM. It is desirable to look at all the revised rules in one context. For example, if the focus of this NPRM is on reducing burdens on cellular applicants, then Section 22.942 should be changed in this Docket (or in Docket No. 90-358) to extend the due date of the complete affirmative direct case from 30 to 150 days after Public Notice as suggested by SWB. This will assist in reducing burdens on licensees since resources will be spent after it is certain there is a competing renewal application. There are numerous other issues pending in reconsideration of these Orders that could also impact the cellular rules proposed to be revised here. Should the Commission revise its rules on reconsideration as suggested by US West New Vector and BellSouth and bifurcate the renewal proceedings -- which GTE supports -- then there will be coordinated rule changes necessary to Part 22.

available to the public in the unserved areas. Although GTE agrees in principle with this recommendation, GTE urges the FCC to proceed with caution. The Commission on November 4, 1992 released its Third Report and Order and Memorandum Opinion and Order on Reconsideration, FCC 92-472, in CC Docket No. 90-6. This action was intended to resolve several open issues in the unserved area proceeding including the resolution of ten Petitions for Reconsideration of the First Report and Order in CC docket 90-6. Because of the complexity of the unserved areas issue, and since unserved areas have not yet been determined (updated system information and updated service area maps using the new 32 dBu standard have not been scheduled or accepted for filing), GTE recommends that interim operating authority policy be addressed in a formal rulemaking proceeding and not as part of the rewrite. This will allow all of the implications to be fully explored, confusion can be avoided, and FCC staff resources conserved.

Concerns regarding the elimination of the fixed service restriction under the cellular service option, are not warranted.

Some parties have expressed concern with the FCC's proposal to eliminate the current restriction limiting the fixed use of cellular spectrum under the cellular service option to Basic Exchange Telecommunications Radio Service ("BETRS"). As noted in the NPRM, Appendix A, §22.901:

[C]arriers currently wishing to provide a fixed-incidental service with compatible equipment must request a waiver to permit such use. We routinely grant such waivers, and can not envision a circumstance under which we would deny such a waiver. Thus it appears that the restriction on incidental fixed services is unnecessary. Carriers desiring to provide an incidental fixed service must comply with state certification requirements, if any.

GTE supports this proposed change since it is consistent with the goals of the rewrite (i) to eliminate outdated rules and (ii) to allow licensees greater flexibility in providing service to the public. In addition, it will save valuable FCC staff resources since it will eliminate the need to process waiver requests which the FCC notes it routinely grants and cannot envision a circumstance when one would be denied.

When the Commission originally adopted this restriction, the FCC was concerned that such fixed offerings would become a dominant use of cellular spectrum. This has clearly not become the case. Waivers for fixed-incidental use have not become the threat to the provisioning of basic local exchange services that was considered in the CC Docket 87-390 proceeding. Since the FCC's proposal includes a requirement for "state certification," if required, the proposed elimination of the current FCC restriction will still allow oversight by State Commissions. Thus, concerns over this FCC rule proposal are unwarranted.

Privacy concerns of users of spectrum need to be respected.

PacTel Paging et al. requests modification of Section 22.167 to add a new subsection (d) which would allow persons to perform monitoring of common carrier transmissions under the guise of potentially filing for a finder's preference and would afford these persons the protection of acting as an "agent" for the Commission, PacTel Paging at 66. While some spectrum-based services are not protected by the Electronic Communications Privacy Act, GTE does not believe the FCC should authorize parties to intercept the contents of communications under the guise of searching for unused spectrum. Non-

content monitoring which does not interfere with authorized uses raises less of a privacy concern and GTE would have no objection to such a limited approach.

If the Commission expands emergency operations, it should articulate the circumstances that qualify for such operations.

SWB at 26 has suggested expanding the proposed Section 22.307 to include more than "natural disaster" type emergencies. SWB proposed expansion of what would be an emergency and would allow carriers in these instances to not be liable for non-compliance with FCC Rules and the Communications Act ("the Act"). The issue here is how broad will the non-natural disaster emergencies be and whether a carrier should be required to comply with the FCC Rules and the Act to the extent possible and as soon as possible. GTE notes that the FCC's power to waive non-compliance with a statute is limited. An agency can waive its own rules but not a statute. The agency could adopt a policy of non-enforcement of certain statutory provisions under rare and special circumstances.

GTE does not object to expanding the scope of emergencies provided there is a clear articulation of the circumstances defining an emergency (*i.e.*, Presidential- or Governor-declared emergency or request of governmental official or law enforcement official). The L. A. Riots were an emergency, but not a natural disaster. However, often times a carrier needs to start restoration activities before senior governmental officials have made their assessment and declared an emergency condition. As long as a governmental official -- even a law enforcement official -- has requested the emergency operation, this should suffice.²

² The Federal Highway Administration ("FHWA") recently expanded its emergency service rules and the FCC might wish to pattern its rules after

GTE opposes Claircom's Emissions Limitation.

Claircom at 8 proposes a change to Section 22.861 Emission Limitations. GTE opposes the proposal to reduce the transmitter emissions mask of second and higher adjacent channels from 50 to 46 dB below the total emission power. The FCC has recognized that limiting transmitter emissions is key to compliance with the established emissions limits of -130 dBm for the first adjacent and -148 dBm for higher adjacent channels. Reduction of the transmitter mask makes air-to-ground systems more interference limited.

Assuming only 46 dB second channel performance from a transmitter implies that the desired signal level is -102 dBm and the first adjacent channel level is -132 dBm. If the two adjacent channels are in use, then the Carrier/Interference ("C/I") ratio of the desired channel is 25 dB. The margin to threshold is only 13 dB. Systems requiring C/I = 20 dB would only have 5 dB of fade margin which can easily be exceeded in the air-to-ground environment. A fade of 13 dB would drop the signal below the established threshold. A transmitter mask of 50 dB for the second adjacent channel is necessary to mitigate the effects of interference and fading.

those emergency conditions rules. See 57 Fed. Reg. 33,638 (1992). FHWA allows a local emergency to be declared by "a local government official having authority to declare public emergencies," Id.

The Air-to-Ground Agreement should be reflected in the Rules.

In its initial Comments at 17 and 24, GTE requested the Commission to specifically list the August 31, 1992 agreement between the Federal Communications Commission of the United States of America and Department of Communications of Canada Concerning the Use of the Bands 849-851 MHz and 894-896 MHz Along the United States-Canada Border ("the ATG Agreement") in the Rules. GTE suggested reference in Section 1.955 as well as a new Section 22.804. GTE recently received a copy of the ATG Agreement and is including a copy as Attachment A to these Reply Comments.

GTE supports SWB Comments on Public Notices (Proposed Rule 22.127).

SWB at 23 opposed the FCC proposal to change the requirement for "weekly" Public Notices of applications to an ambiguous "periodic" schedule. The current system provides timely tracking of application filings. The rule change as proposed provides no commitment as to maintaining timely postings. The proposed schedule would preclude timely mutually exclusive ("MX") applications in those areas where they will be retained. By not having weekly notices, it is envisioned that the FCC will "batch" large volumes of data which will lead to more administrative effort to review the Public Notice and a greater chance of inaccurate data. GTE agrees with SWB that the current schedule should be retained.

GTE endorses US West New Vector's approach to First Come, First Served (Proposed Rule 22.509).

In its initial Comments at 4, GTE advised that while it generally supported first-come, first-served, it had reservations concerning the impacts on existing systems. In this respect GTE believes US West New Vector at 3-5 has identified serious issues with the first-come, first-served, proposal. First-filed allows for potential, non-viable applicants to intentionally block expansion efforts of existing licensees. It will create speculation in applications and create a "land rush" to file the day the new rules are effective. GTE views this as unnecessary, burdensome, and costly for the business. As suggested by US West New Vector, there should be a 30-day period allowing qualified competitors to submit MX applications for common properties.

The construction period in Proposed Rule 22.511 should be reduced from one year to six months for Paging and Radiotelephone Service.

GTE suggests that the 1 year construction period in proposed Section 22.511 be reduced to 6 months to encourage use of frequency on a timely basis. In addition, this recommendation would help prevent warehousing of frequency by the undercapitalized firms, as well as to urge the larger firms to display a sense of urgency towards developing wireless networks.

The Commission should explore electronic submission of data.

Given the capacity of magnetic disks, availability of common word processing packages, acceptance of personal computers, and the transmitting power of electronic mail (e-mail) networks, GTE encourages the FCC to

investigate the electronic submission of data and applications. Congress recently removed one impediment to electronic submissions via the National Telecommunications and Information Administration reauthorization bill, the Telecommunications Authorization Act of 1992 ("TAA 1992"). Section 204 of the TAA 1992, Electronic Filing of Applications, amends the Communications Act and allows for submission of applications via electronic means by removing the written signature requirement. This demonstrates Congressional intent to encourage electronic submissions. Thus, GTE opposes Comments submitted by Bell Atlantic at 4 which suggest that a magnetic disk format for filings will only complicate the filing process. The FCC can recommend a common software package and format with minimal effort. The FCC requires ARMIS and other data to be filed on disks and parties are fully capable of complying. GTE fully supports electronic media submission which is much quicker and more easily tracked.³

The TAA 1992 will allow the FCC to extend antenna tower liability to tower owners.

In its initial Comments at 21 GTE urged the FCC to shift primary responsibility for antenna tower lighting, painting, marking, and maintenance to tower owners. At that time GTE urged the Commission to defer to the Federal Aviation Administration since in some cases the tower owner might not be a

³ While disagreeing with Bell Atlantic on the media of the submission, GTE agrees with Bell Atlantic on the need for all data necessary to accurately review the application. Thus, GTE supports Bell Atlantic's Comments at 21 concerning revisions to the proposed Form 401. Critical information to analyze harmful interference needs to be supplied on the new Form and in a consistent manner to ensure that sound engineering practices are being followed and interference criteria are being met.

licensee. In the TAA 1992, Section 210, Congress revised Section 303(q) of the Communications Act to require the FCC to have -- in addition to the permittee or licensee -- the tower owner also responsible for painting and/or illumination of the tower "in any case in which the owner is not the permittee or licensee." Thus, the FCC has statutory authority to shift primary tower responsibility where it belongs, with the tower owner.

Finder's Preference (Proposed Rule 22.167).

In its initial Comments at 18 GTE supported Finder's Preference which encourages efficient use of spectrum and reduces warehousing of frequency. After reviewing the Comments of other parties, GTE suggests this Section include a notice requirement to the current licensee and the provision of a reasonable time frame to respond to an inquiry. The response should be completed within 30 days.

Multi-channel transmitters (Proposed Rule 22.507).

After reviewing the Comments of other parties, GTE joins in the opposition to the proposed rule as written. GTE concurs with comments submitted by Telocator at 34-38, as well as others, that there are legitimate uses for channel-agile base station transmitters. Channel-agile transmitters facilitate the introduction of new services to the public. In addition, economic efficiencies can be gained by restricting or duplicating similar equipment components in system design. This translates to lower costs for service. As stated by Telocator at 38: "[P]rohibiting the use of channel-agile transmitters would obstruct the legitimate efforts of carriers to offer additional and varied services. The Commission

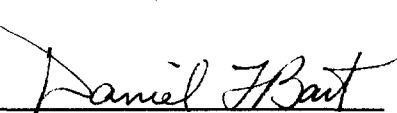
should not adopt a proposal that would discourage flexible use of the spectrum to enhance the reliability, quality and diversity of public mobile services."

CONCLUSION

Eliminating unnecessary regulations and streamlining those that remain are valid goals. However, as shown in GTE's Comments and Reply Comments the FCC must proceed with caution. What appear to be simple changes can have major impacts. The Commission should ensure that the rewritten rules only achieve the purposes intended and do not make unintended substantive changes to the public mobile service rules.

Respectfully submitted,

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behalf of its affiliated domestic
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ATTACHMENT A

CONFIRMATION OF ACCEPTANCE

The attached Arrangement Between the Federal Communications Commission of the United States of America and the Department of Communications of Canada Concerning the Use of the Bands 849-851 MHz and 894-896 MHz Along the United States-Canada Border is accepted as an understanding between our two agencies. This Arrangement will become effective on August 31, 1992, and is to be applied provisionally until the definitive entry into force of a replacement for the Agreement concerning the coordination and use of radio frequencies above thirty megacycles per second, with Annex, as amended.

Thomas P Stanley

Thomas P. Stanley 8/18/92
Chief Engineer
Federal Communications Commission

David Mulcaster A/ADMRS

David Mulcaster 28 Aug/92
A/Assistant Deputy Minister
Research and Spectrum,
Department of Communications

**Arrangement Between
The Department of Communications of Canada
and the Federal Communications Commission
of the United States of America
Concerning the Use of the Bands
849-851 MHz and 894-896 MHz**

1.0 Scope

- 1.1 This arrangement between the Federal Communications Commission of the United States of America and the Department of Communications of Canada, herein referred to as the Agencies, covers the coordination and operation of air-to-ground radio services operating in the bands 849-851 MHz and 894-896 MHz.
- 1.2 This arrangement is subject to review at any time at the request of either Agency.
- 1.3 This Arrangement will be applied provisionally until the definitive entry into force of a replacement for the Agreement concerning the coordination and use of radio frequencies above thirty megacycles, with Annex, as amended.¹

2.0 General Sharing Arrangements

- 2.1 Both countries shall have full use of the bands 849-851 MHz and 894-896 MHz for air-to-ground radio services in accordance with the provisions contained in this arrangement.

3.0 Channelization

- 3.1 The bands 849-851 MHz and 894-896 MHz shall be channelized and divided into ten channel blocks as set forth in Appendix A.
- 3.2 Each channel block shall be divided into control and communications channels with a guardband between the control and communications channels, as shown in Appendix A.

¹ Exchange of notes at Ottawa, October 24, 1962. Entered into force October 24, 1962. USA: Treaties and Other International Acts Series (TIAS) 5205; CAN: Canada Treaty Series (CTS) 1962 No. 15.

Agreement Revising the technical annex to the Agreement of October 24, 1962 (TIAS) 5250/CTS 1962 No. 15). Effected by exchange of notes at Ottawa, June 16 and 24, 1965. Entered into force June 24, 1965. USA: TIAS 5833 / CAN: CTS 1962 No. 15.

3.3 Each agency may vary the number of control channels and communications channels in each channel block based on the requirements in each country.

3.4 The authorized channel bandwidths for each control channel and each communications channel shall be 3.2 kHz and 6.0 kHz, respectively.

4.0 Station Locations/Channel Plan

4.1 Agencies may assign frequencies to ground stations to provide service to airborne mobile stations, as set forth in paragraphs 4.2 to 4.4, below:

4.2 No prior coordination is required for ground stations within 885 km (550 miles) of the United States/Canada border provided they are located within 8 km (5 miles) of the coordinates specified in the attached Appendix B and assigned frequencies from the channel block specified for that location. Any Ground stations using the same channel block must be located within 3.2 km (2 miles) of each other.

4.3 Ground stations within 885 km (550 miles) of the United States/Canada border not located within 8 km of the coordinates specified in Appendix B or using frequencies other than those specified for that location may be implemented only subject to the approval of both Agencies.

Coordination of such ground stations will be undertaken by the system operators prior to request for approval by the Agencies.

4.4 No prior coordination is required for ground stations beyond 885 km of the United States/Canada border.

5.0 Technical Requirements

5.1 Effective Radiated Power

The effective radiated power (ERP) of airborne mobile stations shall not exceed 30 watts. Except as specified in section 6 below, the ERP of ground stations shall not exceed 100 watts.

6.0 Low Power Operation

6.1 Agencies may assign a channel to a ground station, at a location not specified in the block channelling plan contained in Appendix B, for the provision of radio service to aircraft on the ground. The following restrictions apply:

- 6.2 The ERP of a ground station transmitter authorized under the provisions of this section shall not exceed 1 watt.
- 6.3 Such channels may not be used to provide service to aircraft in flight.
- 6.4 Such channels shall not be assigned within 480 km (300 miles) of a location specified in Appendix B for that frequency or within 480 km of any other locations and channels coordinated by either Agency as per paragraph 4.3.
- 6.5 No interference is caused to any ground station providing service to aircraft in flight.
- 6.6 Such operations shall not claim protection from any ground station operation providing service to aircraft in flight.
- 6.7 Operators in each country are advised to consult with the operators in the other country regarding their use of the low power systems within 480 km of the United States/Canada border to ensure interference-free operations. Should any difficulties arise that cannot be resolved between the operators, respective agencies in each country may be called upon to assist in resolving the problem.

BLOCK CHANNELLING PLAN

LIST OF REFERENCE SITES AND ASSOCIATED CHANNELLING PLAN

<u>LOCATION</u>	<u>N. LATITUDE</u>	<u>W. LONGITUDE</u>	<u>CHANNEL BLOCK</u>
Vancouver, B.C.	49° 11'	123° 06'	10
Kelowna, B.C.	49° 52'	119° 18'	8
Calgary, Alta.	51° 05'	114° 00'	9
Edmonton, Alta.	53° 32'	113° 29'	2
Herbert, Sask.	50° 25'	107° 13'	10
Broadview, Sask.	50° 22'	102° 34'	9
Winnipeg, Man.	49° 52'	97° 15'	8
Fort Frances, Ont.	48° 36'	93° 25'	2
Thunder Bay, Ont.	48° 27'	89° 15'	10
North Bay, Ont.	46° 21'	79° 28'	3
Mississauga, Ont.	43° 37'	79° 40'	10
Montreal, Quebec	45° 27'	73° 43'	8
Halifax, N.S.	44° 51'	63° 32'	9
Edmunston, NB	47° 24'	68° 15'	10
Sault Ste. Marie, Ontario	46° 31'	84° 20'	1
Toronto, Ontario	43° 40'	79° 23'	5
Stephenville, NF	48° 33'	58° 35'	8

BLOCK CHANNELLING PLAN

LIST OF REFERENCE SITES AND ASSOCIATED CHANNELLING PLAN

<u>LOCATION</u>	<u>N. LATITUDE</u>	<u>W. LONGITUDE</u>	<u>CHANNEL BLOCK</u>
ALASKA			
Anchorage	61°11'06"	149°54'42"	8
Cordova	60 33 00	145 43 00	5
Ketchikan	55 21 20	131 42 33	5
Juneau	58 21 18	134 34 30	4
Sitka	57 03 30	135 22 01	7
Yakutat	59 30 30	142 30 00	8
ALABAMA			
Birmingham	33 23 24	86 39 59	2
ARIZONA			
Phoenix	33 35 39	112 05 12	4
Winslow	35 01 17	110 43 02	6
ARKANSAS			
Pine Bluff	34 10 56	91 56 18	8
CALIFORNIA			
Blythe	33 36 39	114 42 24	10
Eureka	40 42 59	124 12 09	8
Los Angeles	33 56 45	118 23 03	4
Oakland	37 51 12	122 12 30	1
S. San Francisco	37 41 15	122 26 01	6
Visalia	36 19 36	119 23 22	7
COLORADO			
Colorado Springs	38 44 39	104 51 56	8
Denver	39 46 45	104 50 49	1
Hayden	40 29 04	107 13 08	6
FLORIDA			
Miami	25 48 27	80 16 30	4
Orlando	28 26 53	81 22 00	2
Tallahassee	30 24 02	84 21 18	7
GEORGIA			
Atlanta	33 39 05	84 25-54	5
St. Simons Isld.	31 09 22	81 23 14	6
HAWAII			
Mauna Kapu	21 24 24	158 06 02	5
IDAHO			
Blackfoot	43 11 34	112 20 57	8
Caldwell	43 38 45	116 38 44	10

ILLINOIS				
Chicago	41	46	49	87 45 20 3
Kewanee	41	12	05	89 57 33 5
Schiller Park	41	57	18	87 52 57 2
INDIANA				
Fort Wayne	40	59	16	85 11 31 7
IOWA				
Des Moines	41	31	58	93 38 54 1
KANSAS				
Garden City	37	59	35	100 54 04 3
Wichita	37	37	24	97 27 15 7
KENTUCKY				
Fairdale	38	04	48	85 47 33 6
LOUISIANA				
Kenner	30	00	44	90 13 30 3
Shreveport	32	27	09	93 49 38 5
MAINE				
Holden	44	44	20	68 42 05 6
MASSACHUSETTS				
Boston	42	23	15	71 01 03 7
MICHIGAN				
Bellville	42	12	17	83 29 09 8
Flint	42	58	21	83 44 22 9
Sault Ste Marie	46	28	45	84 21 31 6
MINNESOTA				
Bloomington	44	51	30	93 13 19 9
MISSISSIPPI				
Meridian	32	19	10	88 41 33 9
MISSOURI				
Kansas City	39	18	37	94 41 07 6
St. Louis	38	42	45	90 19 19 4
Springfield	37	14	28	93 22 54 9
MONTANA				
Lewistown	47	02	56	109 27 27 5
Miles City	46	25	30	105 52 30 8
Missoula	47	01	05	114 00 41 3
NEBRASKA				
Grand Island	40	58	00	98 19 11 2
Ogallala	41	07	11	101 45 37 4

NEVADA

Las Vegas	36 05 35	115 10 25	1
Reno	39 35 13	119 55 52	3
Tonapah	38 03 43	117 13 24	9
Winnemucca	41 00 39	117 45 58	4

NEW MEXICO

Alamogordo	32 54 46	105 56 41	8
Albuquerque	35 03 05	106 37 13	10
Aztec	36 48 42	107 53 48	9
Clayton	36 27 29	103 11 16	5

NEW JERSEY

Woodbury	39 50 01	75 09 21	3
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NEW YORK

E. Elmhurst	40 46 21	73 52 42	1
Schuyler	43 09 09	75 07 50	2
Staten Island	40 36 05	74 06 35	9

NORTH CAROLINA

Greensboro	36 05 54	79 56 42	9
Wilmington	34 16 10	77 54 24	3

NORTH DAKOTA

Dickinson	46 51 05	102 47 35	7
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OHIO

Pataskala	40 04 38	82 41 57	1
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OKLAHOMA

Warner	35 29 31	95 18 25	4
Woodward	36 24 42	99 28 50	9

OREGON

Albany	44 38 24	123 03 36	5
Klamath Falls	42 06 30	121 38 00	2
Pendleton	45 35 45	118 31 02	7

PENNSYLVANIA

Coraopolis	40 30 33	80 13 27	4
New Cumberland	40 11 30	76 52 02	8

SOUTH CAROLINA

Charleston	32 54 10	80 01 20	4
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SOUTH DAKOTA

Aberdeen	45 27 21	98 25 26	6
Rapid City	44 02 36	103 03 36	5
Mitchell	43 41 25	98 00 27	10

TENNESSEE

Elizabethton	36 26 04	82 08 06	7
Memphis	35 01 44	89 56 15	10